

a monitoring device which is configured to control or regulate the load lifting system and/or the drive system of the truck based on the wheel load sensor data. At least two wheels of the truck have a speed-of-rotation sensor connected to the monitoring device. At least one wheel on the front axle of the truck has a wheel bearing with an integrated wheel load sensor.

Avitan is directed to a stabilization system having a rear steer wheel 34 with an annular weight load transducer 86 that generates a signal indicative of the axial weight load on the rear wheel. While the Examiner notes in paragraph 4 of the Office Action that Avitan does not mention the load sensor-monitoring device combination of claim 1, the Examiner relies upon Yuki for this teaching. Applicants respectfully disagree with this combination. Yuki discloses a control device for an unloading mechanism for a truck. While Yuki does teach a load sensor 106, this load sensor is to detect the weight of a load carried by the truck in order to correct for horizontal positioning of the fork in accordance with the amount of bending of the upright and/or the fork due to the weight of the load (Yuki at column 7, lines 60-66). While the section of Yuki noted by the Examiner (columns 6-8, lines 5-29) does discuss "tilting", it is the tilting of the upright 10 on which the forks 18 are mounted which is discussed, not tilting or tipping of the truck itself. Therefore, even if one were to incorporate the teachings of Yuki into that of Avitan, it would result simply in a system which addresses the tilting of the upright upon which the forks are mounted rather than tipping of the fork lift truck. Additionally, neither Avitan nor Yuki, either alone or in combination, teaches or suggests the claimed industrial truck in which at least one wheel on the front axle has a wheel bearing with an integrated wheel load sensor. As discussed in the present specification at page 3, lines 6-9, this configuration eliminates the need for special force transducers, thereby simplifying the structure of the invention. Additionally, neither Avitan nor Yuki, either alone or in combination, teaches or suggests the claimed industrial truck having at least two wheels with speed-of-rotation sensors which are connected to the

monitoring device. Therefore, for all of the above reasons, claim 1 is not believed obvious in view of the cited references. Reconsideration of the rejection of claim 1 is respectfully requested.

Claims 3, 5, 9, and 10 depend either directly or indirectly from, and add further limitations to, claim 1. Since these claims depend from a claim believed to be in condition for allowance, these claims are also believed to be in condition for allowance. Additionally, claim 3 includes the limitation that the wheel load sensors are provided on all of the wheels of the truck. In Avitan, the rear wheel has the load sensor. In Yuki, the load sensor is for the truck mast, not for the wheels. Therefore, claims 3, 5, 9, and 10 are believed patentable over the cited prior art and in condition for allowance. Reconsideration of the rejections of these claims is respectfully requested.

Claim 2 stands rejected for obviousness over the teachings of Avitan and Yuki in view of the teachings of U.S. Patent No. 5,947,516 to Ishikawa. In view of the above amendments and the following remarks, reconsideration of this rejection is respectfully requested.

Avitan and Yuki have been discussed above. Ishikawa is directed to a swing control apparatus for an industrial vehicle. The swinging of the rear axle 16 is restricted to enhance the lateral stability of the vehicle based on the height or weight of the carried load (column 8, lines 58-62). However, Ishikawa does not overcome the shortcomings of the Avitan and Yuki combination discussed above with respect to claim 1. Since claim 2 depends from claim 1, claim 2 is believed allowable for substantially the same reasons as discussed above.

Claims 4, 12, and 13 stand rejected for obviousness over the teachings of Avitan, Yuki, and Ishikawa in view of the teachings of U.S. Patent No. 5,937,965 to Takagi et al. (hereinafter "Takagi"). Since the limitations of claim 4 have been incorporated into

independent claim 1, Applicants will discuss the patentability of independent claim 1 over the cited combination of references.

The Avitan, Yuki, and Ishikawa combination has been discussed above. Takagi discloses a vehicle load responsive power steering system having a controller 12 that monitors an axle load sensor 10 and a vehicle speed signal S_2 . Based on vehicle speed, a control valve 13 is opened or closed to supply an assist force to the power steering system. While the Examiner notes that Avitan, Yuki, and Ishikawa do not disclose a wheel on the front axle having a wheel bearing with an integrated wheel load sensor, the Examiner relies on Takagi for this limitation (the Examiner cites column 3, lines 39-61). However, as discussed in the cited section and as shown in Fig. 1, the load sensor 10 of Takagi is not an integrated load sensor but rather is attached to the frame 4 of the vehicle. Moreover, Takagi is directed to a power steering system and is not concerned with the tilting problems associated with conventional fork lift trucks. It appears that the Examiner is arbitrarily picking and choosing bits and pieces from several different prior art references in order to reconstruct the claimed invention. However, it is a basic principle of the United States patent laws that an Examiner may not arbitrarily select prior art patents and combine portions of the selected patents in accordance with 35 U.S.C. § 103 on the basis of Applicants' disclosure to create a hypothetical combination which allegedly renders the subject matter of the application claimed obvious. There must be some direction in the prior art patents to combine the selected portions thereof in a manner to negate the patentability of the claimed subject matter by rendering that subject matter obvious to one of ordinary skill in the pertinent art. Applicants believe the combination created by the Examiner for the purpose of rejecting the claims is improper since the only basis for the combination is the hindsight provided by the Applicants' disclosure. While many of the individual elements of the Applicants' claimed invention might be found somewhere in the selected prior art references,

it is the Applicants' claimed combination of these elements that provides the unique industrial truck stabilizing system of the presently claimed invention. Furthermore, it is the Applicants' claimed combination of these elements which is not taught or suggested in the applied prior art. All of the claimed elements of the Applicants' invention are important aspects of the invention and are related and combined to form the unique industrial truck stabilization system of the present invention. Therefore, for all of the above reasons, claim 1 is believed patentable over the cited combination. Reconsideration of the rejection of claim 1 is respectfully requested.

Claims 12 and 13 depend from claim 1 and are believed allowable for the same reasons as discussed above.

Claims 6-8, 11, and 17-19 stand rejected for obviousness over Avitan and Yuki in further view of U.S. Patent No. 4,828,066 to Hayashi. As set forth above, Applicants have cancelled claim 6 and have added the limitations of claim 6 (as well as those of claim 4) into amended claim 1. The Avitan and Yuki combination has been discussed above. Hayashi discloses a control apparatus for an electrically driven power steering system for a fork lift truck. Again, Hayashi is not directed to controlling the tilting of the truck but rather is directed to increasing the steering characteristics of the truck by enhancing the power steering system. However, Hayashi does not overcome the shortcomings of the Avitan and Yuki combination discussed above with respect to claim 1. Therefore, claim 1 is believed patentable over the cited combination and in condition for allowance. Since claims 7, 8, and 11 depend from claim 1, these claims are believed allowable for substantially the same reasons as discussed above with respect to claim 1. Claims 17-19 have been cancelled, thereby rendering these rejections moot.

Claims 14-16 stand rejected for obviousness over the teachings of Avitan and Yuki in view of the teachings of U.S. Patent No. 6,062,804 to Young et al. (hereinafter

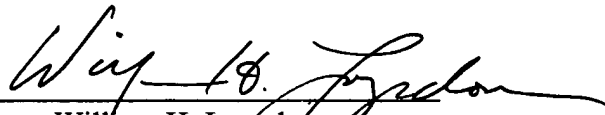
"Young"). In view of the above amendments and the following remarks, reconsideration of these rejections is respectfully requested.

The Avitan and Yuki combination has been discussed above. Young discloses a load carrying body 18 having a "V" shaped floor and a "V" shaped ejector. The ejector is configured to push material, such as soil, out of the body 18. However, Young does not teach or suggest that this ejector has any impact on tipping of the vehicle or that such a system would work or could work in an industrial truck. Therefore, claims 14 and 15, which depend from claim 1, are believed allowable for substantially the same reasons as discussed above with respect to claim 1. Reconsideration of the rejections of claims 14 and 15 is respectfully requested. Claim 16 has been cancelled.

In view of the above amendments and remarks, Applicants believe claims 1-3, 5, and 7-15, as amended, are patentable over the cited prior art and are in condition for allowance. Reconsideration of the rejections and allowance of claims 1-3, 5, and 7-15 are respectfully requested.

Respectfully submitted,

WEBB ZIESENHEIM LOGSDON
ORKIN & HANSON, P.C.

By 

William H. Logsdon
Registration No. 22,132
Attorney for Applicants
700 Koppers Building
436 Seventh Avenue
Pittsburgh, PA 15219-1818
Telephone: (412) 471-8815
Facsimile: (412) 471-4094

Marked-Up Copy of the Claims

1. (Amended) An industrial truck, comprising:

a plurality of wheels;

a load lifting system;

a drive system;

a stabilizing device configured to prevent tipping of the truck and
comprising a plurality of wheel load sensors, each load sensor connected to an individual
wheel and configured to measure a wheel load; and

a monitoring device, wherein the load sensors are connected to the
monitoring device which is configured to control or regulate at least one of the load lifting
system and the drive system of the truck based on the wheel load sensor data,

wherein at least two wheels of the truck have a speed-of-rotation
sensor connected to the monitoring device, and

wherein the truck includes a front axle and at least one wheel on the
front axle of the truck has a wheel bearing with an integrated wheel load sensor.

7. (Amended) The industrial truck as claimed in claim 1 [6], wherein each
speed-of-rotation sensor is integrated into a wheel bearing.

11. (Amended) The industrial truck as claimed in claim 1 [6], wherein
the two wheels with the speed-of-rotation sensors are located on the same axle.